



MANAGING HAZEL (SÚRIP) FOR BASKETRY AND NUTS

Introduction

California Hazelnut (Súrip) basketry sticks and nuts have declined in quality and quantity due to fire exclusion policies. Currently the Karuk Tribe is leading efforts to restore traditional fire management in their ancestral territory, and research is being conducted to document the effects of cultural burning and fire inclusion on Hazel sticks for basketry and nuts for food. This research is being guided by Karuk basketweavers and land managers to meet the eco-cultural objectives of the Karuk Tribe.

Methods

Social Science

- Built relationships of accountability and trust between researchers, basketweavers and Tribal practitioners.
- Conducted interviews with basketweavers.
- Attended over 50 basket weaving classes and gathering trips to evaluate what constitutes hazel stems of basketry quality, and to document the costs and benefits of gathering at different locations.

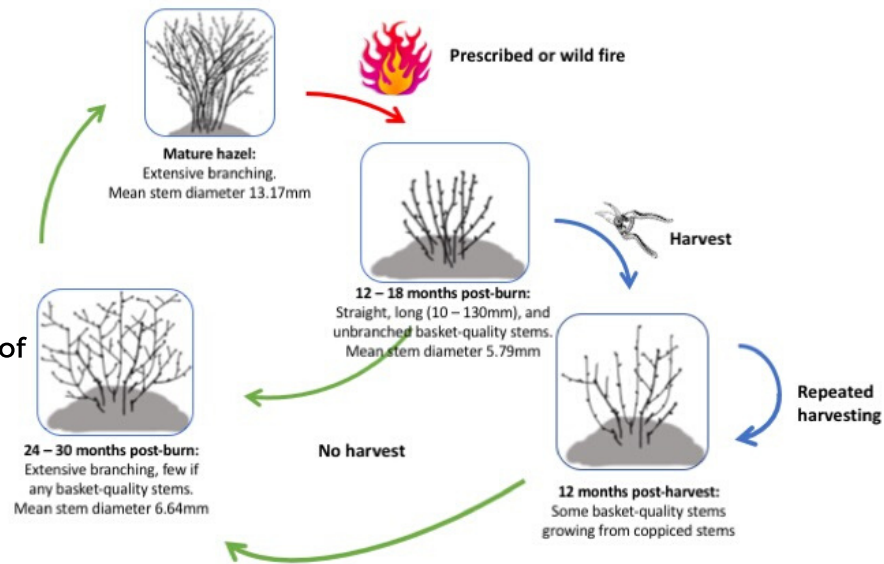
Ecological Science

- Compared the effects of non-treatment and 4 fire proxy treatments developed by basketweavers on the production of basketry stems in 105 hazelnut shrubs. These treatments were: 1) Cutting all stems in shrub to ground level; 2) Conducting small pile burns on shrubs; 3) Applying a propane torch flame to top-kill shrub stems; and, 4) Conducting a broadcast burn that spread across multiple shrubs.
- Monitored the density of hazelnut shrubs and basketry stem production at 21 cultural burn sites and 12 adjacent unburned sites.
- Monitored nut production across 48 sites with varying fire histories and sunlight access



Results

- Hazelnut basketry sticks are in high demand by Karuk basketweavers.
- Hazelnut shrubs produce 13-fold more basketry sticks (Average = 11 basketry stems) 1 growing season post-burn compared with shrubs 3 or more growing seasons post-burn.
- Basketweavers prefer to gather at sites that are culturally burned at high frequency (3 or more times in the past 30 years), because the density of hazelnut shrubs at these sites are almost 2-fold greater than sites that have not been burned regularly (2 or fewer times in the past 30 years).
- Pile burning, propane torching, and prescribed broadcast burning increased the production of basketry sticks 7 to 10-fold in comparison with untreated shrubs, while the cutting treatment only produced 4-fold more basketry sticks than untreated shrubs.
- Deer and elk browse reduce the number of quality basketry sticks.
- There is greater nut production at sites with greater access to sunlight at least 4 years post-burn.



Discussion

Despite fire exclusion policies, Karuk basketweavers retained their knowledge, maintained their practices and, most importantly, developed innovative techniques to produce essential basketry materials. This research effort has been able to quantify the effects of these techniques by monitoring basketry stems and observing gathering practices. Increasing the scale and frequency of cultural burning is fundamental to maintaining basketweaving and the baskets that are a necessary part of Karuk culture and ceremony.

Marks-Block T, Lake FK, Curran LM. 2019. Effects of understory fire management treatments on California Hazelnut, an ecocultural resource of the Karuk and Yurok Indians in the Pacific Northwest. *For. Ecol. Manage.* 450:117517

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